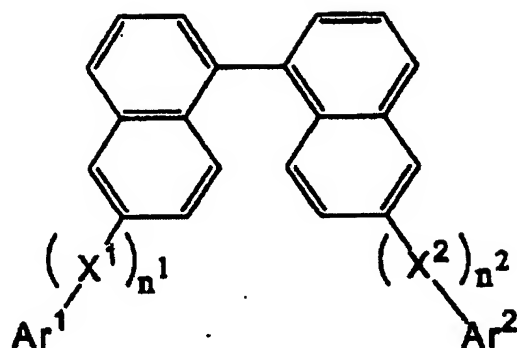


## CLAIMS

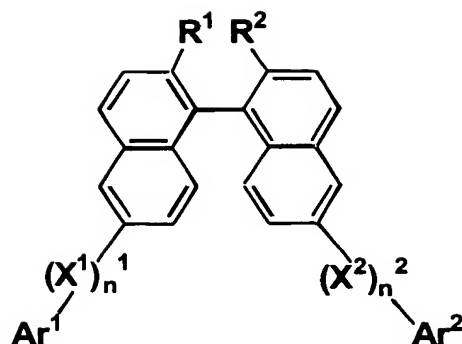
What is claimed is:

1. A binaphthyl compound of the formula:



wherein each  $Ar^1$  and  $Ar^2$  is independently a substituted or non-substituted aromatic hydrocarbon or a substituted or non-substituted aromatic heterocycle, each  $X^1$  and  $X^2$  is independently a substituted or non-substituted aromatic hydrocarbon, each  $n^1$  and  $n^2$  is independently 0 or 1, and wherein the compound's binaphthyl framework can be independently substituted at any position except those occupied by  $(X^1)_{n^1} Ar^1$  and  $(X^2)_{n^2} Ar^2$ .

2. The binaphthyl compound of claim 1 wherein both  $Ar^1$  and  $Ar^2$  are three, four or five-condensed aromatic rings.
3. The binaphthyl compound of claim 1 wherein both  $X^1$  and  $X^2$  are one, two or three-condensed aromatic rings.
4. A binaphthyl compound of the formula:

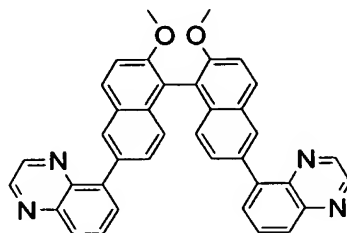


wherein each  $\text{Ar}^1$  and  $\text{Ar}^2$  is independently a substituted or non-substituted aromatic hydrocarbon or a substituted or non-substituted aromatic heterocycle, each  $\text{X}^1$  and  $\text{X}^2$  is independently a substituted or non-substituted aromatic hydrocarbon, each  $n^1$  and  $n^2$  is independently 0 or 1, each  $\text{R}^1$  and  $\text{R}^2$  is independently a hydroxyl group, a substituted or non-substituted alkyl group, or a substituted or non-substituted alkoxy group, wherein  $\text{R}^1$  and  $\text{R}^2$  can be bound to each other to form a ring structure wherein the ring structure can have substituent groups, and wherein the compound's binaphthyl framework can be independently substituted by a halogen, a hydroxyl group, or a substituted or non-substituted alkyl, alkenyl, alkoxy or alkoxycarbonyl group at any position except those occupied by  $(\text{X}^1)n^1\text{Ar}^1$ ,  $(\text{X}^2)n^2\text{Ar}^2$ ,  $\text{R}^1$  and  $\text{R}^2$ .

5. The binaphthyl compound of claim 4 wherein each  $\text{R}^1$  and  $\text{R}^2$  is an alkoxy group.
6. A fluorescent dye of the binaphthyl compound of claim 1.
7. An organic light emitting device having an anode and cathode and an emissive layer between the anode and cathode, and including a layer comprising the binaphthyl compound of claim 1.

8. An organic light emitting device having an anode and cathode and an emissive layer between the anode and cathode, the emissive layer comprising the binaphthyl compound of claim 1.
9. The device of claim 8 wherein the concentration of the binaphthyl compound is between 0.01 to 20% by weight.
10. An organic light emitting device comprising an anode and a cathode, and an emissive layer between the anode and cathode, the device including a layer between the emissive layer and the cathode comprising the binaphthyl compound of claim 1.
11. An organic light emitting device comprising an anode and a cathode, and an emissive layer between the anode and cathode, the device including a layer between the anode and the emissive layer comprising the binaphthyl compound of claim 1.
12. An organic light emitting device comprising an anode and a cathode, and an emissive layer between the anode and cathode, the device including a layer between the emissive layer and the cathode comprising the binaphthyl compound of claim 4.
13. An organic light emitting device comprising an anode and a cathode, and an emissive layer between the anode and cathode, the device including a hole-blocking layer between the emissive layer and the cathode comprising the binaphthyl compound of claim 1.
14. An organic light emitting device comprising an anode and a cathode, and an emissive layer between the anode and cathode, the device including a hole-blocking layer between the emissive layer and the cathode comprising the binaphthyl compound of claim 4.

15. The organic light emitting device of claim 15 in which the hole-blocking layer between the emissive layer and the cathode comprises a compound of the formula:



16. The device of claim 8 wherein the emissive layer contains a phosphorescent dye dopant.

17. The device of claim 16 wherein the phosphorescent dye dopant is fac-tris(2-phenylpyridine) iridium(III)